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Ce qui plait aux yeux, plait au cœur,
Telle est la maxime en usage,
L'homme est leger, il est volage,
Et neglige le vrai bonheur;

La nature pour sa toilette
A cree les roses par milliers.
Sages!—Cherchez la Violette,
Laissez aux fous tous les rosiers.

DISCOVERIES AND IMPROVEMENTS IN ARTS, MANUFACTURES, &c.

A new and expeditious mode of Budding, by Thomas Andrew Knight, esq. F. R. S.

PARKINSON, in his Paradisus Londoniensis, which was published in 1629, has observed, that the nursery-men of his days had been so long in the practice of substituting one variety of fruit for another, that the habit of doing so was almost become hereditary amongst them: were we to judge from the modern practice, in some public nurseries, we might suspect the possessors of them, to be the offspring of intermarriages, between the descendants of those alluded to by Parkinson. He has, however, mentioned his "very good friend, Master John Tradescant" and "Master John Miller," as exceptions; and similar exceptions are, I believe, to be found in modern days. It must, however, be admitted, that wherever the character of the leaf does not expose the error of the grafter, as in the different varieties of the peach, and nectarine, mistakes will sometimes occur; and therefore a mode of changing the variety, or of introducing a branch of another variety, with great expedition, may possibly be acceptable to many readers of the Horticultural Transactions.

The luxuriant shoots of peach and nectarine trees are generally barren; but the lateral shoots emitted in the same season, by them are often productive of fruit, particularly if treated in the manner recommended by me in the Horticultural Transactions of 1808. In the experiments I have there described, the bearing wood was afforded by the natural buds of the luxuriant shoots; but I thought it probable that such might as readily be afforded by the inserted buds of another variety, under the appropriate management. I therefore, as early in the month of June, of the year 1808, as the luxuriant shoots of my peach trees were grown sufficiently firm to permit the operation, inserted buds of other varieties into them, employing two distinct ligatures to hold the buds in their places. One ligature was first placed above the bud inserted; and upon the transverse section through the bark: the other, which had no farther office than that of securing the bud, was applied in the usual way. As soon as the buds (which never fail under the preceding circumstances) had attached themselves, the ligatures last applied were taken off, but the others were suffered to remain. The passage of the sap upwards was in consequence much obstructed, and the inserted buds began to vegetate strongly in July: and when these had afforded shoots about four inches long, the remaining ligatures were taken off, to permit the excess of sap to pass on; and the young shoots were nailed to the wall. Being there properly exposed to light, their wood ripened well, and afforded blossoms in the succeeding spring: this would, I do not doubt, have afforded fruit; but that, leaving my residence at Elton for this place, I removed my trees, and the whole of their blossoms in the last spring proved, in consequence, equally abortive.

On the parts of Trees primarily impaired by age. In a letter from T. A. Knight, F.R.S. to the Rt. Hon. Sir Joseph Banks, Bart. K.B.P.R.S.—From the Philosophical Transactions of the Royal Society of London.

In the first communication I had the honour to address to you, (it was in the year 1795), I stated the result of many experiments on grafted trees, from which I inferred that each variety can be propagated with success, during a limited period only; and that the graft, or other detached part of an old tree, or old variety, can never form that, which can with propriety be called a young tree.

I have subsequently endeavoured to ascertain which, amongst the various organs that compose a tree, first fails to execute its office, and thus tends to bring on the incurable debility of old age; and the result of the experiments appears sufficiently interesting, to induce me to communicate an account of them to you.

Whatever difference exists between the functions of animal and vegetable life, there is a very obvious analogy between some of the organs of plants, and those of animals; and it does not appear very improbable, that the correspondent organ, in each, may first fail to execute its office; and satisfactory evidence of the imperfect action of any particular organ can much more easily be obtained in the vegetable, than in the animal world.—For a tree may be composed, by the art of the grafter, of the detached parts of many others; and the defective, or efficient, operation, of each organ, may thus be observed with the greatest accuracy. But such observations cannot be made upon animals; because the operations necessary cannot be performed; and therefore, though there would be much danger of error in incautiously transferring the phenomena of one class of organized beings to another, I conceive that experiments on plants may be, in some cases, useful to the investigator of the animal economy. They may direct him in his pursuits, and possibly facilitate his inquiries into the immediate causes of the decay of animal strength and life; and on a subject of so much importance to mankind, no source of information should remain unexplored, and no lights, however feeble, be disregarded.

Naturalists, both of ancient and modern times, have considered the structure of plants, as an inversion of that of animals, and having compared the roots to the intestines, and the leaves to the lungs, of animals; and the analogy between the vegetable sap, and animal blood, is very close and obvious. The experiments also, of which I have at different periods communicated accounts to you, supported by the facts previously ascertained by other naturalists, scarcely leave any reasonable grounds of doubt, that the sap of trees circulates, as far as is apparently necessary to, or consistent with, their state of existence and growth.

The roots of trees, particularly those in coppices, which are felled at stated periods, continue so long to produce, and feed, a succession of branches, that no experiments were wanted to satisfy me, that it is